DOCUMENT RESUME

ED 334 324 UD 028 143

AUTHOR Meyer, Luanna H.; And Others
TITLE Identifying At-Risk Status and Preventing School Drop-Out.
PUB DATE 91
NOTE 24p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 1991).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attitude Measures; *Dropout Characteristics; *High Risk Students; Junior High Schools; Middle Schools; *Predictive Validity; *School Involvement; Self Evaluation (Individuals); Student Attitudes; *Test Validity; Urban Schools
IDENTIFIERS *Syracuse City Schools NY

ABSTRACT

This report describes the methodology and findings of the validation of a user-friendly, early predictor measure to identify at-risk students among Syracuse (New York) middle school students. The School Self-Rating (SSR) is designed to assess various dimensions of student attitudes that have been linked to at-risk status and that provide an assessment of school involvement from the students' perspective. The SSR is a 30-question survey that asks students to rate their agreement or disagreement with specific statements regarding their attitudes and abilities on a Likert-like scale. Earlier versions of the SSR significantly predicted at-risk status independent of a standardized achievement test. This study compares at-risk and not-at-risk students using the SSR, the Iowa Test of Basic Skills (ITBS), student achievement and attendance, and classroom participation. A representative sample of 803 students took the SSR in October 1990. The following findings are presented: (1) the total SSR score was a significant predictor of at-risk status; (2) overall, the SSR shows high internal consistency as measured by Cronbach's alpha; and (3) students appeared interested in the SSR and did not resist completing the survey. A list of 11 references and 2 tables of statistical data are appended. (FMW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ERIC

ED334324

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Luanna Meyer
Syracuse Univ.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Identifying At-Risk Status and Preventing School Drop-Out

Luanna H. Meyer, Berj Harootunian, and

Dilafruz Williams

Syracuse University

Running Head: School Self Rating

Presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1991. This work was supported in part by the Syracuse Stay In School Partnership Project, funded by the New York State Education Department. The opinions expressed herein do not necessarily reflect the position or policy of the New York State Education Department, and no official endorsement should be inferred. Dilafruz Williams is now affiliated with Portland State University. We wish to acknowledge the assistance of Paul Casavant, David Cole, Nirmala Erevelles, Alan Steinberg, and Nancy Sweeney at various stages of data collection and analysis, and thank the teachers and principals of the Syracuse City Middle Schools for their help.
Requests for further information should be sent to Luanna H. Meyer, Ph.D., School of Education, 805 S. Crouse Avenue, Syracuse University, Syracuse, New York 13244-2280.

VD028143

BEST COPY AVAILABLE

Concomitant with the national concern regarding the achievement levels of students in school, attention continues to be focused upon the large number of students who leave school prior to graduating from high school (LaPointe, Mead, & Phillips, 1989; NAEP, 1985; Turning Points, 1989). While the calucation of precise statistics is difficult for many reasons, best estimates are that at the present time, as many as 25% of today's ninth graders will not finish high school within four years. In major metropolitan areas, the percentage is even higher--up to 50% or more (Hammack, 1987). Students who eventually drop out are more likely to have a history of poor school performance and attendance, and a disproportionate number of these students come from families ranking lower than average on measures of socioeconomic status and are members of a racial/ethnic "minority" group. Being overage in eighth grade is a power predictor, as is high school pregnancy, marriage, and employment along with poor school performance (Ekstrom, Goertz, Pollack, & Rock, 1987; Wehlage & Rutter, 1987). The implications of a future generation that includes both large numbers of underachievers as well as as many as one in four adults who did not even complete high school are sobering in a society that values literacy, technology, and faces serious social, economic, and environmental challenges. In America, children may legally leave school at age 16, and the years prior to that age may be critical:

> Young adolescents today make fateful choices, fateful for them and for our nation. The period of life from ages 10 to 15 represents for many young people their last best chance to choose a path toward productive and fulfilling lives (Turning Points, 1989, p. 20).

Clearly, variables that predict dropping out of school and underachievement include certain demographic characteristics that would seem to be beyond the control of the school and our educational system. Or are they? There is a wealth of information to suggest that many of the variables predictive of school failure and alienation are indeed the school's responsibility: "Everyone agrees that the way young people experience school is the most frequently cited reason for quitting school" (Natriello, 1987, p. 5). Students say they left because they were failing anyway, because they could not get along with their teachers, and simply because they did not like school. In addition to negative attitudes toward school, other student socio-psychological characteristics associated with dropping out are low educational and occupational motivation, social isolation from positive peer models, low self-esteem, external locus of control, and discipline problems (though measures of these variables with drop-out status have not always proved reliable). Unlike background characteristics, these variables would seem to be modifiable by schools on a year by year basis and by teachers from day to day.

Natriello (1987) suggested that the alarmly high statistics on school drop-out may indeed reflect failures to learn, but must also be acknowledged as evidence of schools that fail to teach. Natiello challenged that schools "push out" the underachiever by their very nature. If this is so, then a basic restructuring of the school experience may be needed to ensure that schools are more capable of providing a supportive, educationally meaningful, and inclusive environment for today's diverse student population. Traditional approaches to intervention with students labeled at-risk for school drop out have perhaps themselves contributed to the alienation of youth already isolated from the life of the school. Whenever such programs exist as separate tracks and emphasize pull-out remediation, they further reinforce longstanding socio-economic and ethnic segregation patterns in the schools:

> The inflexibility of track placement, ... represents a problem of paramount proportions. Black and other low-income students are often imprisoned in the bottom tracks, shunted away from mainstream classroom instruction....[M]ost frequently, black students are dropped into low-ability groups, sometimes at a very early age, with little possibility of movement upward. James Rosenbaum, in Making Inequality likens inflexibility tracking to a sports tournament: "When you win, you win only the right to go on to the next round; when you lose, you lose forever" (Committee on Policy for Racial Justice, 1989, p. 18).

These concerns regarding the broader, societal consequences of tracking policies in the schools are further highlighted by the equivocal evidence regarding the effectiveness of tracking as a strategy to meet academic needs (Slavin, 1987).

Syracuse Area Needs in Drop-Out Prevention

Syracuse City School District presents an outstanding opportunity to demonstrate the feasibility of enhancing student achievement and involvement while maintaining a commitment upon equity in a region of considerable cultural diversity. District policies support full inclusion of all students in the regular school and classroom: Even students with severe handicapping conditions attend their home-zone school with nondisabled peers. The City School District currently offers a range of academic enhancement and remedial support educational activities and programs to make full inclusion work for students.

Approximately 21,000 students are enrolled in the City School District, of whom 46% are African-American, Native American, Latino, and members of other "minority" ethnic and cultural groups; a significant percentage speak English as a second language. The school population also represents considerable academic and socioeconomic needs. Five of the six middle schools are AI/DP eligible, and an average of 14% of the middle school population of approximately 3200 students receive special education (higher than the national percentage). The chronic truancy rate (the percentage of students absent more than 20% of the time) at the six schools ranges from a low of 4.1% to a high of 13.8%. In 1989-1990, we identified more than 800 students from the total enrollment as being at-risk based upon the dual criteria of an absentee rate of 20% or more and/or

failing to pass 5 or more courses at mid-year. Students from non European-American ethnic groups were disproportionately represented in this statistic. Our project was designed to focus upon the needs of this at-risk group.

The Syracuse Stay-In-School Partnership Project

In August 1987, A Syracuse City School District-Syracuse University Task Force was named to participate in a series of working meetings from September 1987 through February 1988 to develop major directions for a collaborative effort to promote academic and social success for underachieving students in the city's middle schools. The middle school was selected as the focus of the effort as a time with the potential to represent a "fresh start" for students showing clear signs of being at-risk.

The Task Force included university personnel, district administrators, principals, counselors, teachers, and parents from the middle school population. The planning year was spent gathering information from the literature and at the district level on drop-out prevention, with a special focus on evidence gathered from former students regarding why they left school (Casavant, 1987). As the District already offered various individually focused initiatives directed at academic remediation, it was determined that the Stay In School Project would be directed to the social and academic structure of the mainstream--students would not be visibly labeled nor would they be "pulled-out" for intervention. Instead, the focus would be

upon instructional innovations within the regular classroom delivered by the teacher, including Cooperative Learning, Peer Support Networking, and Multicultural Education (see Meyer, Harootunian, Williams, & Steinberg, 1991, for more information).

This paper presents a brief overview of the method and findings of the validation of a user-friendly, early predictor measure to identify at-risk status. Such a measure could have great utility as a Student Self-Rating that could be given at the beginning of the school year, scored easily by the teacher and other school personnel, and used as the basis of planning for academic involvment and peer support activities.

Method

Sample

Not all of the 800 at-risk and 3200 total student population were available for the validation studies. Ours was a selective sample in that only those students enrolled in the classes taught by participating teachers (approximately 15-30 during any given school year) were assessed on all measures, including the School Self Rating being developed by the project. During the 1988-1990 school years, samples of approximately 200 at-risk and 800-1000 not-at-risk students participated in these assessments. As the assessments were carried out as part of the evaluation of a school program component, parent permission was not required and there was virtually no loss of data (other than student absences on the survey date) within the classes taught by participating

teachers. These teachers elected to participate in project activities to implement Cooperative Learning and Multicultural Education components in their classes, and included the subject areas of physical education, reading, English, social studies, science, and mathematics; other than the fact that these were teachers interested in the project, they were not viewed as being different than other teachers in their buildings, nor did they teach specialized or tracked classes different from other classes. Thus, the sample should be fairly representative of the Syracuse area student population.

The data reported here are based upon 803 students who took the School Self-Rating in October 1990 (during the third project year), including 458 girls (57%) and 345 boys (43%). 422 or 52.6% were seventh graders, and 381 or 47.4% were eighth graders. Of the total, 402 or 50.1% were white, 325 or 40.5% were African-American, 26 or 3.2% were Puerto Rican, 8 or 1% were Asian-American, 6 or .7% were Native American, 4 or .5% were Spanish surname, 1 student was listed as Portuguese, and 31 or 3.9% as "Other." Using the dual criteria of absent 20% or more and/or passing fewer than 5 courses at the end of the first marking period, 105 or 13.1% of the students would be regarded as "at-risk"; boys contributed slightly more than did girls to this category, with 11.79% of the girls and 14.78% of the boys falling into the at-risk group. Ethnically, Asian-Americans and European-Americans were least at risk (0% and 9.7% respectively).

African-Americans slightly exceeded the overall percentages with 14.46% in the at-risk category, and Latinos (Puerto Rican, 34.62%, or Spanish surname, 75%), and Native Americans (50%) were most at risk. However, relatively small numbers provided the statistics for certain ethnic groups in this sample (e.g., Native Americans).

The School Self-Rating Measure

The overall evaluation design includes comparisons of at-risk vs. not-at-risk students within the target classes on all measures, as well as a comparison of at-risk students across target vs. non-target classes on most measures. In addition to the School Self-Rating measure described here, data analysis includes the Iowa Test of Basic Skills, student grade point averages/courses passed and failed/attendance and tardiness records, and teacher records of student participation in classroom activities. For this paper, the utility, internal consistency, and validity of the School Self-Rating for use by school staff in the identification of at-risk status will be emphasized. This measure is designed to assess various dimensions of student attitudes that have been theoretically linked to at-risk status and which provide an assessment of school involvement from the student's perspective. The measure was originally based in part upon a measure described in Brookover, Paterson, and Thomas (1962), and the analyses and

subsequent major revisions to two earlier versions resulted in the measure reported here (Meyer, Williams, Steinberg, & Harootunian, 1989).

The 1990-1991 version of the School Self-Rating includes 30 questions for which students are asked to rate their agreement-disagreement with specific statement responses regarding their attitudes and performance across a range of 5 choices reflecting a Likert-type scale. The directions emphasize that "There are no "right" or "wrong" answers. Instead it is important to give us your opinion. Please be honest about your feelings!" Students are assurred that their answers are confidential and their personal responses will not be revealed. Teachers were not told individual self-ratings, but given group results only, consistent with our statements to the students guaranteeing the privacy of individual self-ratings. The survey requires approximately one-half hour total administration time for a class of 20-30 students. All data were analyzed using SAS.

Results and Discussion

Table 1 displays the overall mean scores and standard deviations for all items, along with the percentage of students scoring each response from a low of 1 to a high of 5. In addition, separate means and standard deviations are included for the at-risk and not-at-risk sub-samples along with the results of the appropriate test for mean differences. Twelve of the items discriminated the two groups (see Table 1), and most of these

consisted of ratings of academic performance with some referring to attitudes about the importance of school. It is interesting to note the high percentage of students with very positive self-ratings on most of these items--higher than would be predicted according to their grade point averages or attendance in school. Note, for example, that 79% answered "Yes, definitely" and 17% answered "Yes, probably" to item 16 regarding whether they have the ability to finish high school; only 2.7% were "not sure" and less than 1% said "Probably not" or "No, definitely not." In fact, 52.4% and 31.7% said they would be "Very likely" or "Somewhat likely", respectively, to complete the more than 4 years of college needed to become a doctor, lawyer, or university professor; only 11.5% said "Not sure either way" and slightly more than 4% responded "Unlikely" or "Most unlikely." Yet, 46.8% said their teachers would consider them to be of average ability, while 29.8% and 20% responded that their teachers would rate them as "above average" or "very high" in ability, respectively (item 21). At least at self-report, students in middle school are more optimistic about their future than they believe their teachers to be about their potential for achievement. Either the students are ultimately unrealistic, or our belief that middle school could represent a fresh start for students is indeed reflected in student beliefs about themselves at this age level. The total School Self Rating Score was a significant predictor of at risk status ($F=12.99$, 1,727 df, $p<.0003$).

To determine possible dimensions of student self ratings, results were factor analyzed using an oblique rotation method. As students tended to leave some items unanswered, a student was included in the sample for this analysis only if 5 or fewer items were omitted; the mean scores on those items were then entered for that student. If more than 5 items were left unanswered, the student was deleted from the analysis. Three dimensions emerged (see Table 2): Attitude, Academic Self-Appraisal, and Cooperation. The General Linear Models Procedure was used to determine whether each factor was a predictor of at-risk status. The first two factors significantly discriminated the at-risk vs. the not-at-risk groups (for Attitude, $F=5.83$, 1,727 df, $p<.02$; for Academic Self-Appraisal, $F=23.51$, 1,727 df, $p<.0001$). The third factor, Cooperation, did not ($F=.00$, 1,727df, $p<.96$). Items were included on a factor if the loading was high (generally above .40) and that item did not also load significantly on another factor (e.g., if an item that loaded in the .40 range on one factor also loaded between .30 and .40 on another, that item was not included).

The **Attitude** dimension includes items reflecting the student's attitude toward the importance of school and school participation, and could be considered to represent a self-rating of school importance or motivation to achieve and be engaged in school. The **Academic Self-Appraisal** clearly reflects the student's self-rating of his/her own academic abilities.

Finally, the **Cooperation** dimension includes four items that assess the student's opinions about working together with other students to master academic goals. Only the Academic Self-Appraisal sub-scale was moderately correlated with overall grade point average, $r=.49$ ($p<.0001$), though both Attitude ($r=.19$, $p<.0001$) and Cooperation ($r=.14$, $p<.0004$) were also positively correlated. These correlations were based upon only the results of the first marking period (mid-semester, at the end of October 1990), however.

Overall, the School Self-Rating shows high internal consistency as measured by Cronbach's alpha (.84). The Attitude and Academic Self-Appraisal factors were also internally consistent (both with Cronbach's alphas of .84), while the Cooperation factor was not (.50); with only 4 items, this third factor is predictably unrealiable. Thus, the interesting finding that Cooperation did not differentiate the two groups must be tempered by the need to further develop and validate this sub-scale dimension. It may be, of course, that student attitudes toward cooperation in principle would support the use of Cooperative Learning as a strategy to better engage students at-risk in academic learning.

At year's end, the School Self-Rating will be administered as a posttest to measure potential changes in any of the dimensions as a function of project activities and school participation. Further, the availability of end-of-the-year

grades and other achievement measures will allow for further examination of the psychometric features of the School Self-Rating. Earlier versions have significantly predicted at-risk status independent of a standardized achievement measure (the Iowa). As a major goal is to validate a highly useful self-rating for use by school personnel to identify and prevent at-risk status, there would be distinct advantages in having access to a measure that can be taken at the beginning of the school year rather than waiting until failure occurs to "predict" at-risk status.

Summary

The availability of an efficient and valid student self-rating that reliably predicts at-risk status for poor academic achievement, poor attendance, and eventual school drop-out would be most useful in drop out prevention efforts. Scores on such a measure that could be available to school personnel at the beginning of the year could be used as the basis of instructional and social support planning. Particularly given our experiences that students are interested in the School Self-Rating and do not resist completing the survey, this measure has potential as an evaluation tool for use in prevention and intervention.

References

Brookover, W. B., Paterson, A., & Thomas, S. (1962). Self-concept of ability and school achievement, II. U. S. Office of Education Cooperative Research Project No. 1636. East Lansing: Michigan State University Bureau of Educational Research Services.

Carnegie Council on Adolescent Development. (1989). Turning Points: Preparing American Youth for the 21st Century: The Report of the Task Force on Education of Young Adolescents. New York: Carnegie Corporation of New York.

Casavant, P. J. (1987). A study of school dropouts in the Syracuse City Schools: Summary results. Syracuse: Syracuse City School District.

Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1987). Who drops out of high school and why? Findings from a national study. In G. Natriello (Ed.), School dropouts: Patterns and policies (pp. 52-69). New York: Teachers College Press.

LaPointe, A.E., Mead, N. A., & Phillips, G.W. (1989, January). A world of differences: An international assessment of mathematics and science. Princeton, NJ: ETS.

Meyer, L.H., Harootunian, B., Williams, D., & Steinberg, A. (1991, April). Inclusive middle schooling practices: Shifting from deficit to support models. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Meyer, L.H., Williams, D., Steinberg, A., & Harootunian, B. (1989). Identifying and preventing at-risk status for school drop out at the middle school level, working paper #1: Results of the preliminary School Self-Rating. Syracuse: Syracuse University Stay In School Partnership Project.

National Assessment of Educational Progress. (1985). The reading report card, progress toward excellence in our schools, trends in reading over four national assessments, 1971-1984. Princeton, NJ: ETS.

Natriello, G. (1987). Introduction. In G. Natriello (Ed.), School dropouts: Patterns and policies (pp. 1-19). New York: Teachers College Press.

Slavin, R.E. (1987). Ability grouping and student achievement in elementary schools: A best-evidence synthesis. Review of Educational Research, 57, 293-336.

Wehlage, G.G., & Rutter, R.A. (1987). Dropping out: How much schools contribute to the problem? In G. Natriello (Ed.), School dropouts: Patterns and policies (pp. 70-88). New York: Teachers College Press.

Table 1. Student Responses on School Self-Rating

Item	Overall X (SD)	Percentage of Students Scoring Each Response[a] 1	2	3	4	5	X(SD) Not At Risk (n = 641)	X(SD) At Risk (n = 88)	t[b]	p<
1. Academic performance compared to classmates	3.55(.79)	0.5	2.6	53.4	28.7	14.8	3.59(.78)	3.22(.82)	4.21	.0001
2. Whether school is fun and enjoyable	3.46(.88)	2.5	3.6	54.7	24.3	15.0	3.47(.86)	3.36(.98)	1.06	n.s.
3. Importance of grades	4.52(.68)	0.7	0.8	4.1	34.3	60.1	4.55(.66)	4.35(.83)	2.10	.04
4. Importance of being on time	4.22(.82)	0.1	3.3	14.5	38.3	43.8	4.23(.82)	4.19(.87)	.35	n.s.
5. Self-evaluation of academic work	3.81(.70)	0.1	2.1	28.7	54.9	14.3	3.85(.68)	3.51(.74)	4.34	.0001
6. Parents' attitude about doing well	4.64(.63)	0.7	0.5	2.7	25.8	70.2	4.65(.61)	4.61(.78)	.39	n.s.
7. Feelings about cooperating in groups	3.60(1.29)	10.0	12.1	15.0	34.0	28.9	3.60(1.29)	3.61(1.25)	-.12	n.s.
8. Attitudes of friends toward attendance	3.56(1.03)	4.9	7.4	32.4	37.0	18.2	3.54(1.01)	3.70(1.17)	-1.24	n.s.
9. Feelings about not doing well	3.94(.89)	0.7	6.7	18.4	46.6	27.6	3.95(.87)	3.83(.97)	1.21	n.s.
10. Rank at completion of middle school	3.77(.79)	0.3	1.0	40.7	37.9	20.2	3.80(.78)	3.55(.82)	2.83	.005
11. Teacher attitude about effort	4.02(.87)	0.8	2.3	24.6	38.7	33.6	4.07(.82)	3.65(1.09)	3.49	.001

Table 1. Student Responses on School Self-Rating

Item	Overall X (SD)	Percentage of Students Scoring Each Response[a] 1	2	3	4	5	X(SD) Not At Risk (n = 641)	X(SD) At Risk (n = 88)	t[b]	p<
12. Getting help from parents	3.81(1.09)	3.8	10.7	15.1	41.4	28.9	3.81(1.09)	3.83(1.04)	-.19	n.s.
13. Feelings about academic competition	2.77(1.27)	12.5	42.0	17.3	12.6	15.6	2.78(1.29)	2.67(1.15)	.78	n.s.
14. Academic performance of close friends	3.43(.74)	1.2	3.4	54.2	33.2	8.0	3.46(.72)	3.26(.83)	2.31	.02
15. Whether I try to improve	4.24(.82)	1.0	1.6	13.6	40.2	43.6	4.28(.79)	3.97(.98)	2.86	.005
16. Ability to finish high school	4.75(.56)	0.3	0.5	2.7	17.1	79.3	4.76(.52)	4.61(.75)	1.83	.07
17. Parents' attitude about effort	4.12(.90)	1.6	2.5	18.2	37.3	40.3	4.18(.86)	3.70(1.11)	3.87	.0002
18. Getting help from a friend	3.28(1.1)	6.9	17.8	27.4	36.1	11.8	3.27(1.08)	3.39(1.23)	-.96	n.s.
19. Ability to finish college	4.30(.91)	2.1	2.3	11.5	31.7	52.4	4.32(.90)	4.18(1.01)	1.30	n.s.
20. Importance of passing courses	4.34(.78)	0.7	1.0	12.1	35.9	50.3	4.40(.73)	3.95(.97)	4.11	.0001
21. Teacher attitude about ability	3.66(.84)	0.4	3.0	46.8	29.8	20.0	3.71(.82)	3.30(.92)	4.38	.0001
22. Importance of attendance	4.36(.84)	1.0	3.0	8.8	33.9	53.4	4.38(.82)	4.20(.96)	1.61	n.s.

Table 1. Student Responses on School Self-Rating

Item	Overall X (SD)	Percentage of Students Scoring Each Response[a] 1	2	3	4	5	X(SD) Not At Risk (n = 641)	X(SD) At Risk (n = 88)	t[b]	p<
23. Grades I am capable of getting	4.50(.67)	0.1	0.7	7.3	32.6	59.3	4.55(.62)	4.14(.91)	4.15	.0001
24. Attitude about students helping one another	3.60(1.31)	5.8	22.1	13.3	23.9	35.0	3.61(1.29)	3.57(1.46)	.26	n.s.
25. Getting help from teacher	4.28(.85)	1.1	3.2	10.3	37.3	48.1	4.26(.86)	4.48(.79)	-2.29	.02
26. Importance of good grades	4.08(.82)	0.7	1.1	23.0	40.3	34.8	4.08(.02)	4.03(.85)	.50	n.s.
27. Whether I feel I belong in school	4.09(.99)	4.1	2.7	12.1	42.7	38.4	4.10(.97)	3.95(1.11)	1.32	n.s.
28. Rank at completion of high school	3.79(76)	0.3	1.0	36.6	43.5	18.7	3.80(.75)	3.74(.84)	.72	n.s.
29. Relevance of classes to real world	3.93(.96)	1.9	7.5	15.8	45.1	29.6	3.94(.97)	3.88(.93)	.57	n.s.
30. Feelings about working alone or in small group	2.69(1.25)	18.5	32.9	18.1	21.5	8.9	2.71(1.25)	3.59(1.25)	.83	n.s.

[a] Range where 1 reflects most negative response and 5 reflects most positive response.

[b] Test for homogeneity of variance was performed to determine appropriate t-test.

Table 2. Factor Analysis Results for the 1990-1991 School Self-Rating

Factor[a] School Self-Rating Scale Items	Factor Pattern Coefficients[b] (Oblique Rotation) 1	2	3
1. Attitude			
4. Importance of being on time.	.73		
22. Importance of attendance.	.70		
15. Whether I try to improve.	.70		
9. Feelings about not doing well.	.69		
3. Importance of grades.	.68		
26. Importance of good grades.	.65		
25. Getting help from a teacher.	.57		
29. Relevance of classes to real world.	.53		
12. Getting help from a parent.	.51		
6. Parents' attitude about doing well.	.46		
2. Whether school is fun and enjoyable.	.45		
17. Parents' attitude about effort.	.45		
20. Importance of passing courses.	.43		
2. Academic Self-Appraisal			
21. Teacher attitude about ability.		.84	
1. Academic performance compared to classmates.		.83	
10. Rank at completion of middle school.		.79	
28. Rank at completion of high school.		.69	
5. Self-evaluation of academic work.		.67	
23. Grades I am capable of getting.		.61	

Table 2. Factor Analysis Results for the 1990-1991 School Self-Rating

Factor[a] School Self-Rating Scale Items	Factor Pattern Coefficients[b] (Oblique Rotation) 1	2	3
3. Cooperation			
30. Feelings about working alone vs. in group.			.72
24. Attitude about students helping one another.			.64
7. Feelings about cooperating in group work.			.58
18. Getting help from a friend.			.42

a Variance explained by each factor eliminating other factors was 1 = 4.16, 2 = 3.42, and 3 = 1.74. Factor 1 was correlated with Factor 2 (r = .43), while Factor 3 was not correlated with Factor 2 (r = .12) or Factor 1 (r = .17).

b Only items loading .40 or higher and not loading high on any other factor were included in each of the three factors.